

CLAIMS

- Sub B1
1. A polyisocyanate composition comprising a titanium complex consisting of titanium and an acetoacetate ester in which the molar ratio of Ti to acetoacetate ester is in the range 1: 2 to 1:8 and said acetoacetate ester is an ester of an alcohol containing 1 to 4 carbon atoms.
2. A polyisocyanate composition according to claim 1 in which the complex is a complex of titanium having a molar ratio of Ti to acetoacetate ester in the range 1 : 2 to 1 : 6.
3. A polyisocyanate composition according to claim 2 in which the molar ratio of Ti to acetoacetate ester is in the range 1 : 2.5 to 1 : 5.
4. A polyisocyanate composition according to any one of the preceding claims in which the acetoacetate ester is ethyl acetoacetate.
5. A polyisocyanate composition according to any one of the preceding claims in which the complex has been prepared from a titanium alkoxide having the general formula $M(OR)_4$ in which M is Ti and R is a substituted or unsubstituted, cyclic or linear, alkyl, alkenyl group.
6. A polyisocyanate composition according to claim 5 in which R contains up to 6 carbon atoms.
7. A polyisocyanate composition according to claim 6 in which R contains up to 4 carbon atoms.
8. A polyisocyanate composition according to any one of claims 1 to 7 in which the complex has been prepared from a condensed titanium alkoxide having the general formula $RO[M(OR)_2O]_xR$ in which M is Ti and x is an integer and R is a substituted or unsubstituted, cyclic or linear, alkyl, alkenyl group.
- Sub B2

9. A polyisocyanate composition according to claim 8 in which the average value of x is in the range 2 to 16.
10. A polyisocyanate composition according to any one of the preceding claims in which the complex is prepared from an alkoxide or condensed alkoxide and displaced alcohol is removed.
11. A polyisocyanate composition according to any one of the preceding claims in which the complex is present in an amount in the range 0.03 to 1 % by weight based on the polyisocyanate.
12. A polyisocyanate composition according to claim 11 in which the amount of complex is in the range 0.05 to 0.5 % by weight based on the polyisocyanate.
13. A polyisocyanate composition according to any one of the preceding claims in which the polyisocyanate is diphenylmethane diisocyanate or a mixture of methylene bridged polyphenyl polyisocyanates.
14. A polyisocyanate composition according to any one of the preceding claims additionally comprising a diluent.
15. A polyisocyanate composition according to claim 14 in which the diluent is a phthalate, an aliphatic carboxylate, a fatty acid ester, linseed oil or soybean oil.
16. A polyisocyanate composition according to claim 15 in which the diluent is present in an amount in the range 1 to 40 parts by weight per 100 parts by weight of polyisocyanate.
17. A polyisocyanate composition according to any one of the preceding claims additionally comprising a formaldehyde condensate adhesive resin.
18. A polyisocyanate composition according to claim 17 in which the formaldehyde condensate adhesive resin is present in an amount in the range 1 to 40 parts by weight per 100 parts by weight of polyisocyanate.

19. A polyisocyanate composition according to claim 18 in which the formaldehyde condensate adhesive resin is present in an amount in the range 1 to 20 parts by weight per 100 parts by weight of polyisocyanate.
20. A process for binding lignocellulosic material comprising the steps of
- 5 a) bringing lignocellulosic material into contact with a polyisocyanate composition according to any one of the preceding claims and
- b) subsequently allowing said material to bind.
21. A process according to claim 20 in which the polyisocyanate composition is brought into contact with the lignocellulosic material and the combination thereby formed is
- 10 hot-pressed between metal plates at a temperature in the range 140° C to 270° C and a specific pressure in the range 2 to 6 MPa.
22. A process according to claim 20 or 21 in which the polyisocyanate composition is applied in such an amount as to give a weight ratio of polyisocyanate to lignocellulosic material in the range 0.1 : 99.9 to 20 : 80.
- 15 23. Use of a Titanium complex as defined in claim 1 for accelerating the binding of lignocellulosic materials.

10030364-0110004

Sub B1

Sub B2

Sub B3